

REMARKS

Claims 6-14 were pending in the application. Claims 6-10 have been amended. Claims 15 and 16 have been added. No claims have been canceled. Therefore, claims 6-16 are pending and submitted for consideration.

35 U.S.C. § 101 Rejection

Claims 6-14 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Office Action states that the “method of detecting a malfunction” is not tangibly embodied such as being touched or perceived. Without acquiescing to the propriety of the rejection, Applicant has amended independent claims 6 and 10 to further clarify that they are directed to statutory subject matter. Specifically, claim 6, as amended, calls for a method of detecting a malfunction that comprises, among other things: “determining a difference between a predetermined value and an actual value at regular intervals during the displacement of the element in the component placement device” and “controlling the drive system with a processor to displace or stop movement of the element when the malfunction is detected.” Claim 10, as amended, calls for a component placement device that comprises, among other things, a processor that is configured to “displace or stop movement of the element when the malfunction is detected.” Claims 6 and 10 are tied to a technological art or machine (displacing or stopping movement of the element by the processor upon detection of a malfunction) and, therefore, are respectfully submitted as being directed towards statutory subject matter. *See* MPEP 2106. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 7-9 and 11-14 depend from claims 6 and 10 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

35 U.S.C. § 102(b) Rejection

Claims 6 and 9-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,254,921 ("Matsubara"). The rejection should be withdrawn for at least the following reasons.

Independent claim 6 recites a method of detecting a malfunction during a displacement of an element that comprises, among other things, "multiplying the sampled values of the difference and the derivative." Matsubara fails to teach or suggest such a method of detecting a malfunction. For example, Matsubara does not teach or suggest a method of detecting a malfunction that multiplies "the sampled values of the difference and the derivative." The Office Action contends that Matsubara discloses multiplying "the difference ('estimated position deviation') [Ers] and the derivative ('estimated speed command') [Vcs]." Office Action at p. 4, lines 14-15. To the contrary, Matsubara only discloses determining an estimated speed command (Vcs) by multiplying an estimated position deviation (Ers) with a position loop gain (PG). *See* Matsubara at col. 4, lines 17-20 and Fig. 4. Thus, Matsubara does not disclose multiplying the difference and the derivative. Applicant respectfully requests reconsideration of the rejection of claim 6.

Independent claim 10 recites a component placement device that comprises, among other things, a processor configured to "multiply the sampled values of the difference and the derivative." Matsubara does not teach or suggest such a component placement device. Matsubara merely discloses multiplying a position loop gain (PG) with an estimated position deviation (Ers). Thus, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 10.

Claims 9, 11-14 and new claims 15-16 depend from claims 6 or 10 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

For example, Matsubara does not teach or suggest a method of detecting a malfunction that comprises, among other things, that "the values of the difference and the derivative are sampled *only* on one side of the equilibrium value," as required by claim 15

Similarly, Matsubara fails to teach or suggest a component placement device that comprises, among other things, a processor that "samples the values of the difference and the derivative *only* on one side of the equilibrium value," as required by claim 16. There is no disclosure in Matsubara of sampling *only* on one side of the equilibrium value. Therefore, Applicant respectfully submits that claims 15 and 16 are allowable.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

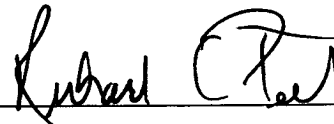
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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